

WHAT IS CLAIMED IS:

1. A medical device, comprising:
a balloon comprising
a first portion; and
a second portion disposed on a selected portion of the first portion,
wherein each of the first portion and the second portion varies in thickness.
2. The device of claim 1, wherein the first and second portions have different compositions.
3. The device of claim 1, wherein the first portion extends substantially the entire length of the balloon.
4. The device of claim 1, wherein the first and second portions have different hardness.
5. The device of claim 1, wherein the second portion is softer than the first portion.
6. The device of claim 5, wherein the balloon has a body portion, and the first portion is thicker at a first portion of the body portion than at another portion of the balloon.
7. The device of claim 5, wherein the balloon has a body portion, and the first portion is thicker at a first portion of the body portion than a cone portion of the balloon.
8. The device of claim 1, wherein the second portion is disposed substantially entirely on the first portion.
9. The device of claim 1, wherein the balloon has a body portion defined substantially entirely by the first portion.

10. The device of claim 1, wherein the balloon has a cone portion, and the thickness of the first portion is generally constant in the cone portion.

11. The device of claim 1, wherein the balloon has a cone portion, and the thickness of the first portion varies over a portion of the cone portion.

12. The device of claim 1, wherein the balloon has a cone portion, and the thickness of the second portion is generally constant in the cone portion.

13. The device of claim 1, wherein the balloon has a cone portion, and the thickness of the second portion varies over a portion of the cone portion.

14. The device of claim 1, wherein the portions extend substantially the entire length of the balloon.

15. The device of claim 1, wherein the portions vary continuously in thickness along the length of the balloon.

16. The device of claim 1, wherein one of the portions includes a step-wise change in thickness along the length of the balloon.

17. The device of claim 1, wherein the balloon has a body portion and a cone portion that are more flexible than the body portion.

18. The device of claim 1, wherein the balloon has a proximal portion and a distal portion that is more flexible than the proximal portion.

19. A medical device, comprising:
a balloon comprising
a first portion; and

a second portion disposed on a selected portion of the first layer, the second portion varying in thickness.

20. The device of claim 19, wherein the second portion is softer than the first portion.

21. The device of claim 19, wherein the first and second portions have different hardness.

22. The device of claim 19, wherein the balloon has a body portion and a cone portion, and the second portion is thinner on the body portion than on the cone portion.

23. The device of claim 19, wherein the balloon has a body portion substantially free of the second portion.

24. The device of claim 19, wherein the balloon has a body portion and a cone portion that is more flexible than the body portion.

25. The device of claim 19, wherein the first portion extends substantially the entire length of the balloon.

26. The device of claim 19, wherein the second portion extends substantially the entire length of the balloon.

27. A medical device, comprising:
a balloon comprising
a body portion,
a cone portion, and
a first layer of polymer extending across a portion of the body portion and a portion of the cone portion, the first layer of polymer having a thickness in the body portion different than a thickness in the cone portion.

28. The device of claim 27, wherein the thickness of the first layer in the portion of the cone portion is substantially constant.

29. The device of claim 27, wherein the thickness of the first layer in the portion of the cone portion tapers.

30. The device of claim 29, wherein the thickness of the first layer tapers increasingly from the cone portion to the body portion.

31. The device of claim 27, wherein the balloon further comprises a second layer over a portion of the first layer, the second layer having a composition different than the first layer.

32. The device of claim 31, wherein the total thickness of the first and second layers is substantially constant in the body portion and in the cone portion.

33. The device of claim 31, wherein the first and second layers extend substantially the entire length of the balloon.

34. The device of claim 31, wherein the second layer is softer than the first layer.

35. The device of claim 34, wherein the first layer is thicker in the body portion than in the cone portion.

36. The device of claim 31, wherein the second layer is harder than the first layer.

37. The device of claim 31, wherein the body portion is less flexible than the cone portion.

38. The device of claim 27, wherein the body portion consists essentially of the first layer.

39. A method of making a medical device, comprising:
forming a tube comprising a first layer and a second layer, the first layer varying in thickness; and
forming the tube into a medical balloon.

40. The method of claim 39, wherein the tube is extruded.

41. The method of claim 39, wherein forming the tube into the medical balloon comprises blow molding.

42. The method of claim 39, wherein the second layer varies in thickness.

43. A medical balloon, comprising:
a plurality of layers formed of a first material and a second material different than the first material,
wherein at least one of the layers varies in thickness axially along the balloon.

44. The balloon of claim 43, wherein the balloon comprises a body portion and a tapered portion, the body and tapered portions having different stiffness.

45. The balloon of claim 43, comprising at least two layers.